M E M O R A N D U M

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SUBJECT: Operational Position Statement for September 8 – September 14, 2015

The U.S. Army Corps of Engineers (USACE) is responsible for managing Lake Okeechobee water levels and makes operational decisions about whether to retain water or release water based on their regulation schedule release guidance (2008 LORS). The USACE makes this decision taking into account the best available science and data provided by its staff and a variety of partners, which includes the South Florida Water Management District (SFWMD).

The SFWMD team has discussed the system-wide environmental conditions, the water supply conditions, and has evaluated the overall status of the water management system. Detailed reports are available at the SFWMD Operational Planning internet page.

This Position Statement is for the period from September 8 through September 14, 2015. At the time of this recommendation, the Lake Okeechobee stage is in the Base Flow Sub-band. Correspondingly Part C and Part D of the 2008 LORS recommend regulatory releases to the WCAs and Base Flow releases to the estuaries to manage lake stages. The SFWMD recommendation is to follow the Lake Okeechobee Adaptive Protocols (AP) release guidance which calls for no lake releases at S-77 because the Caloosahatchee Estuary does not “need” freshwater per the salinity criterion. Specifically, the 30-day average salinity is expected not to raise above the 5 practical salinity units (psu) at the Val-I75 site within the next two weeks.

The SFWMD governing board directed staff to use the SFWMD’s Lake Okeechobee Adaptive Protocols (AP) release guidance as the basis for S-77 release recommendations to the USACE when the lake stage is within or below the Base Flow Sub-band.

The SFWMD recognizes the wet season continues and the USACE may need to manage rising Lake Okeechobee stages by making Base Flow releases. If releases are needed in the future and C-43 basin runoff decreases sufficiently, the SFWMD recommends that the USACE use a pulse release, which is less harmful. Suggested daily discharge rates for 7-day pulses are provided in Table 1 at the end of this memorandum.

The most recent Climate Prediction Center (CPC) outlook for Central and South Florida indicates equal chances (EC) of below, normal and above-normal precipitation for the month of September and the three-month window September to November. The CPC rainfall outlook for the 2015-2016 dry season predicts a substantial increase in the likelihood for above-normal precipitation. SFWMD rainfall for the month of September up to date is above average. Rainfall for the next week is forecast to be average, while the second week forecast is for equal chances of below-average, average and above-average conditions.

Over the 7-day period from September 1 to September 7, 2015, about 500 ac-ft from Lake Okeechobee moved south from the Lake to the STAs.

2008 LORS Release Guidance (Part C): The Lake Okeechobee stage is currently within the Base Flow Sub-band and Part C of the 2008 LORS release guidance recommends "Up to Maximum Practicable to the WCAs if desirable or with minimum Everglades Impacts".

Consistent with the LORS release guidance, the USACE is requesting the SFWMD to implement maximum practicable Lake Okeechobee regulatory releases to the WCAs. However, current and expected conditions will substantially limit capacity for releases south. After continued rainfall for the past week, canals and STAs are still moving and treating EAA runoff and current cell stages are mostly at or exceed targets for optimal vegetation growth. In addition, newly starting crop operations in the EAA will require additional drainage and will use canal capacity. The District will continue to monitor the situation for opportunities to send releases south.

District Everglades scientists have indicated that additional releases south would be beneficial or with minimum impact to the WCAs. A portion of the current discharges from STA-1E/1W into WCA-1 are being passed to WCA-2A through S-10A. Discharges from STA-2 and STA 3/4 into WCA-2 are being delivered to WCA-3A through the S-11 structures and through S-144, S-145 and S-146 into WCA-2B. STA 3/4 discharges are being sent to north east, north west and north central WCA-3A, Holey Land and Rotenberger. NE WCA-3A remains dry and additional discharges through S-150 will help protect peat and wetlands until water levels get above ground.

2008 LORS Release Guidance (Part D): The Lake Okeechobee stage is currently within the Base Flow Sub-band and Part C of the 2008 LORS release guidance is "S-79 up to 450 cfs and S-80 up to 200 cfs"

No regulatory releases from Lake Okeechobee to the St. Lucie and Caloosahatchee Estuaries have occurred since 29-May and 12-June, respectively. Over the past week, flows in the amount of 130 cfs entered the St. Lucie Estuary through S-80, with no contributions from the lake. Flow at S-79 averaged approximately 2,950 cfs with no releases from the lake through S-77.

SFWMD lake scientists report that from an ecological point of view the current stage ascension rate is steep and above the recommended value, but that at the same time the lake stage is still slightly below optimal for this time of the year. As far as possible, a steady increase in stage not to exceed 0.5 feet per month throughout the wet season is recommended.

Currently, there are no ecological benefits associated with additional releases from Lake Okeechobee to the estuaries. In the St. Lucie Estuary, salinity dropped into the fair range for adult oysters. In the Caloosahatchee Estuary, salinity continued to be in the good range for adult oysters at Shell Point and Sanibel, but remained in the poor range at Cape Coral due to relatively high basin runoff. Salinities were also in the good range for tape grass in the upper-Caloosahatchee Estuary, and are forecasted to remain so over the next two weeks, even with no flow through S-79.

Despite some decrease in salinities, conditions in Florida Bay continue to be hypersaline with salinities 7 to 28 psu above average for this time of the year. With the rainfall, salinity at the Taylor Slough (MFL sentinel) site has decreased to 34.8 psu. The very high salinities are a result of below average wet season rainfall for the Everglades and the southern portion of the District, high evaporation, and exceptionally low freshwater inflows into the Bay. However, some increase has been observed in fresh water inflows. No operational actions are possible at this point in time to reverse these conditions. Progression of the current wet season rainfall amounts to normal or above normal conditions will increase fresh flows and reduce salinities in Florida Bay.

SFWMD Lake Okeechobee Adaptive Protocol (AP) Release Guidance

This week the SFWMD's Lake Okeechobee Adaptive Protocol (AP) release guidance flowchart is applicable since the Lake Okeechobee stage is within the Base Flow Sub-band of the 2008 LORS. The Adaptive Protocols process is documented in the District publication Final Adaptive Protocols for Lake Okeechobee Operations (September 16th, 2010).

This week the Lake Okeechobee AP release guidance suggests no releases from Lake Okeechobee at S-77. This week's outcome is based on the current and forecast salinity at the Val-I75 site being below the 5 psu threshold. The specific salinity criterion in the AP release guidance states "Estuary 'needs' water when the 30-day moving average salinity at I-75 bridge is projected to exceed 5 psu within 2 weeks." If the dry conditions continue and the 14-day salinity forecast shows the 30-day moving average staying below 5 psu, then the AP guidance will continue to suggest no releases at S-77.

For additional information pertaining to operations history and past recommendations, refer to the archives of LORS-2008 Release Guidance outcomes and operational position statements at www.sfwmd.gov under the Operational Planning topic.

Table 1. Schedules for 7-day pulses at S-80 and S-79

7-day Pulse Release at S-80

Day	100 cfs	200 cfs
1	100	200
2	300	600
3	150	300
4	100	200
5	50	100
6	0	0
7	0	0

7-day Pulse Release at S-79

Day	100 cfs	450 cfs	650 cfs
1	100	450	650
2	300	850	1100
3	150	700	900
4	100	550	800
5	50	350	600
6	0	250	400
7	0	0	100